

# Weekly report (2012.10.8~10.14)

## Done

1) Two papers about massive model rendering:

a) **Power Plant Walkthrough: An Integrated System for Massive Model Rendering**

<http://www.cs.unc.edu/techreports/97-018.pdf>

This paper divide a massive model into many Textured-Cells, and rendering only one Textured-Cell each time, thus achieve real-time performance.

b) **Billboard Clouds for Extreme Model Simplification**

[http://166.111.120.94/acm/Files/20121014171047234157\[@210.32.174.2\]@page.pdf](http://166.111.120.94/acm/Files/20121014171047234157[@210.32.174.2]@page.pdf)

This paper simplify the model use a few textured polygons, thus achieve an extremely simplification. It's also real-time.

One paper about the analysis of surface deformation:

a) **Interactive Visual Analysis of Surface Deformation**

This paper introduce a framework to view surface deformation by showing model in both 3D model and 2D projection. Along with themeriver(I still don't know how this view works), user can easily capture the change of the model.

2) Think about how to show the inner structure of a complex, massive model. One way is to detect inner parts by analysis the continuity of the depth of each pixel, another way is detect inner parts directly from the mesh structure by assuming each part is continuity at mesh level. The second one is more elegant but Prof. Zhang says the first one is more universal. We'll discuss next week to choose one of them.

## To Do

1) Discuss the way to show the inner structure and implement to see how is the outcome.